

Appendix O

Modified Project Noise Study



**Noise Impact Study for Addendum to the Environmental Impact Report for the
Los Angeles Memorial Sports Arena Redevelopment Project**

Introduction

The Project Site is an approximately 15-acre site located at 3939 South Figueroa Street in the southeastern portion of Exposition Park in the City of Los Angeles, and includes the existing Los Angeles Sports Arena (Sports Arena) and the immediately surrounding surface parking and landscape areas. The Project Site is bounded by Exposition Park Drive (Christmas Tree Lane) to the north, Figueroa Street to the east, Exposition Park Parking Lot 6 to the south, and South Coliseum Drive (Hoover Street) to the west.

The Project Site is located in the southeastern portion of Exposition Park. At approximately 160 acres, Exposition Park is the largest park in the Central Los Angeles area. It is bounded by Exposition Boulevard to the north, Figueroa Street to the east, Martin Luther King, Jr. Boulevard to the south, and Vermont Avenue to the west. Owned by the State of California and leased by various entities, Exposition Park houses the Los Angeles Memorial Coliseum (Coliseum); the Sports Arena (located on the Project Site); the California Science Center; the Dr. Theodore T. Alexander Jr. Science Center School; the California African American Museum; the Los Angeles County Natural History Museum; the Exposition Park Rose Garden; the Wallis Annenberg Building; and the Expo Center, which includes a swim stadium, recreation center, senior citizen center, amphitheater, and pre-school.

Land uses immediately adjacent to the Project Site include Christmas Tree Lane and adjacent landscaped areas to the north; the Coliseum and adjacent surface parking lots across South Coliseum Drive to the west and northwest; Parking Lot 6 to the south; and commercial/retail uses and surface parking lots fronting the east side of Figueroa Street to the east. Residential uses are also located in the vicinity of the Project Site, including single-family and multi-family residential uses fronting Flower Drive to the east, and multi-family residential uses on the south side of Martin Luther King Jr. Boulevard to the south. In addition, the USC main campus is located north of Exposition Boulevard.

An Environmental Impact Report (EIR) was prepared for the Los Angeles Memorial Sports Arena Redevelopment Project (State Clearinghouse No. 2010041059), which was certified by the Los Angeles Memorial Coliseum Commission (Coliseum Commission) on February 2, 2011 (Certified EIR). The Certified EIR analyzed the demolition of the existing Sports Arena on the Project Site, and the development of two potential options on the Project Site: (1) a multiple-use space that would serve as a public venue for civic gatherings, celebratory and entertainment events (e.g.,

festivals, carnivals, rallies, and concerts), and other similar uses (Multi-Use Project); or (2) a Major League Soccer (MLS) Stadium with a permanent seating capacity of approximately 22,000 seats and associated amenities such as restrooms, concessions, press facilities, spectator viewing areas, luxury suites and club seating, and locker and dressing facilities (Original Stadium Project). After the Certified EIR was approved by the Coliseum Commission, the Coliseum Commission leased both the Coliseum and Sports Arena sites to the University of Southern California (USC), allowing development of those uses approved under the Certified EIR.

USC has now agreed with the Los Angeles Football Club (LAFC), which has acquired an MLS expansion franchise, to cooperate with LAFC's efforts to seek approval of certain modifications to the Original Stadium Project in order to develop the LAFC Stadium on the Project Site (Modified Project). The Modified Project would consist of the Original Stadium Project (reconfigured on the Project Site) together with the addition of up to approximately 105,900 square feet of ancillary facility floor area (up to approximately 119,000 gross square feet), including the following uses and floor areas: up to approximately 30,250 square feet of office and conference facility space, including no more than 21,250 square feet of office space; an approximately 36,000-square-foot "World Football" museum; up to approximately 27,750 square feet of team store or other retail space; and up to approximately 11,900 square feet of restaurant uses. The Modified Project also includes signage and lighting programs to support stadium operations. The Modified Project would also develop the VIP parking lot west of the stadium as a reconfigured and improved parking area compared to the existing Sports Arena parking lot.

This Noise Impact Study is prepared for the Addendum to the EIR, which analyzes the Modified Project's proposed modifications to the Original Stadium Project to determine whether implementation of the Modified Project would result in any new significant environmental impacts that were not identified in the Certified EIR, or whether the previously identified significant impacts would be substantially more severe under the Modified Project.

Certified EIR Summary and Thresholds

The Certified EIR for the Original Stadium Project concluded that impacts with respect to construction noise would be significant and unavoidable even with implementation of mitigation (refer to Section IV.G, Noise, of the Certified EIR). With regard to operational noise, the Certified EIR determined that noise associated with stadium events would be significant and unavoidable and that no feasible mitigation would reduce impacts below the applicable thresholds of significance, and that noise associated with traffic and parking lots would be less than significant.

Based upon the criteria established in the City of Los Angeles L.A. CEQA Thresholds Guide, the Certified EIR indicated that the Project would have a significant impact on noise levels from construction if:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise-sensitive use;
- Construction activities lasting more than 10 days in a three month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. or after 6:00 P.M. on Saturday, or at any time on Sunday.

The City of Los Angeles has not adopted any thresholds for groundborne vibration impacts. Therefore, the analysis in the Certified EIR used the Federal Railroad Administration's vibration impact threshold where an impact is considered significant if groundborne vibration from project construction activities exceeds 80 VdB at residences and buildings where people normally sleep.

Based upon the criteria established in the City of Los Angeles L.A. CEQA Thresholds Guide, the Certified EIR also indicated that the Original Stadium Project would have a significant impact on noise levels from Original Stadium Project operations if the project would increase the ambient noise levels by 3 dBA CNEL at the property line of homes where the resulting noise level would be at least 70 dBA CNEL or at the property line of commercial buildings where the resulting noise level would be at least 75 dBA CNEL. In addition, any long-term increase of 5 dBA CNEL or more was considered by the Certified EIR to cause a significant operational noise impact. The CNEL thresholds are generally used to evaluate noise impacts with respect to the off-site traffic noise, as the City of Los Angeles Noise Regulation (Chapter XI of the Los Angeles Municipal Code) does not apply to vehicles traveling on public roadways. In addition to the CNEL threshold, consistent with the City's Noise Regulation, the analysis of the Modified Project's potential noise impacts uses an increase of 5 dBA measured in hourly L_{eq} as a threshold of significance to evaluate potential operational noise impacts at off-site sensitive receptors.

Noise and Vibration Background

The Project Site is located in a highly urbanized environment. Primary noise sources in the vicinity include events at the Coliseum and the existing Sports Arena, traffic on the elevated Harbor Freeway (Interstate 110) located to the east of the Project Site, traffic on adjacent surface streets

and the Exposition Metro Light Rail along Exposition Boulevard. The passive recreational open spaces and outdoor play areas of the Exposition Park educational and museum facilities are also sources of noise in the vicinity of the Project Site.

To establish baseline noise conditions within the vicinity of the Project Site, existing daytime noise levels were documented in the Certified EIR by taking noise measurements at four locations during a non-event weekday. The monitoring locations are illustrated in Figure IV.G-1 on page IV.G-7 of the Certified EIR. The Project vicinity has not changed substantially since preparation of the Certified EIR. As such, the ambient noise levels in the immediate vicinity of the Project Site would be substantially similar to those recorded at the time of the Certified EIR was completed. Additional ambient noise measurements were conducted on May 28, 2015 for Receptor Location 3 (representing the land uses east of the Project Site across Figueroa Street), which confirmed that there are have been no substantial changes in the ambient noise levels identified in the Certified EIR. Therefore, the baseline ambient noise levels from the Certified EIR are used for the Modified Project noise analysis. Table 1 on page 5 provides the measured ambient noise levels at the receptor locations. As indicated therein, noise levels within the Project Site vicinity range from 57.9 dBA L_{eq} at the northern boundary of the Project Site (Receptor Location 2) to up to 76.3 dBA L_{eq} south of the Project Site along Martin Luther King, Jr. Boulevard (Receptor Location 4).

The noise-sensitive receptors within the vicinity of the Project Site include residential uses located east of Figueroa Street (which are accessed from S. Flower Drive), and residential uses located south of Martin Luther King, Jr. Boulevard between Figueroa Street and Menlo Avenue. Noise-sensitive uses in Exposition Park also include museums and the educational facilities. To provide a conservative analysis of construction noise impacts, the open space areas in Exposition Park west and north of the Sports Arena (Receptor Locations 1 and 2, respectively) were considered noise-sensitive uses. As the area within Exposition Park to the north of the Sports Arena currently includes outdoor events and gatherings, it is not considered sensitive to noise from the Modified Project's operational outdoor events and gatherings.

With regard to existing groundborne vibration, the typical sources of groundborne vibration in the vicinity of the Project Site are roadway truck traffic and buses. These vehicles typically generate groundborne vibration velocity levels of approximately 63 vibration decibels (VdB), with levels reaching 72 VdB where the vehicles pass over bumps in the road.

Table 1
Existing Ambient Noise Levels

Receptor Location^a	Description of Receptor	Measured Ambient Noise Levels, dBA L_{eq}
1 ^a	Near southwest corner of Project Site (representing the Ralph M. Parsons Pre-School located within the Expo-Center)	60.4
2 ^b	Northern-central boundary of Project Site (representing the open space area north of the Sports Arena)	57.9
3 ^c	Residential uses east of Figueroa Street (which are accessed from S. Flower Drive), east of Project Site	67.4
4	Residential use on Martin Luther King, Jr. Boulevard (west of Figueroa Street), south of Project Site	76.3
^a The four receptor locations are the same as those set forth in the Certified EIR. Note that the Certified EIR inadvertently switched the order of Receptor Locations 1 and 2 in the construction noise analysis provided in Table IV.G-6 on page IV.G-12. ^b Receptor Location 2 at the northern-central boundary of the site is evaluated for the construction noise impact analysis only as this location is regularly used for events and gatherings and is thus, not a noise-sensitive receptor relative to outdoor events and gatherings within the Project Site. ^c Tables IV.G-6 and IV.G-8 of the Certified EIR described the land uses represented by Receptor Location 3 as residential uses located on the east side of Figueroa Street because they are visible from Figueroa Street. However, these residential uses are located on S. Flower Drive (east of Figueroa Street). Source: Los Angeles Memorial Sports Arena Redevelopment Project, Draft Environmental Impact Report, November 2010.		

Construction Noise and Vibration Impacts

On-site Construction Activities

As set forth in the Certified EIR, construction of the Original Stadium Project would generate noise from the following construction-related activities and sources: demolition and site clearing, grading and site preparation; building construction; paving and asphaltting; construction workers traveling to and from the Project Site; and delivery and hauling of construction supplies and debris to and from the Project Site. During each stage of development, there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of the activity.

As set forth in the Certified EIR, under the Original Stadium Project, off-site construction noise levels would range from 67.9 dBA L_{eq} near the southwest corner of the Project Site to 83.1 dBA L_{eq} at the northern boundary of the Project Site. When compared with the existing ambient noise environment, construction activities associated with the Original Stadium Project would result in

a temporary or periodic increase in noise levels at the off-site noise sensitive receptor locations near the southwestern corner of the Project Site (Receptor Location 1) and near the northern boundary of the Project Site (Receptor Location 2). While Mitigation Measures MM G-1 through MM G-4 would reduce the impacts to the maximum extent feasible, such impacts would remain significant and unavoidable.

Construction of the Modified Project would be completed in approximately 20.5 months, which is slightly longer than the Approved Stadium Project, and would include the following five phases: (1) abatement and soft demolition; (2) structure demolition; (3) grading; (4) building construction; and (5) site finishing. It is anticipated that the types of construction equipment that would be used for construction of the Modified Project would be similar to those used for the Original Stadium Project. A detailed construction noise model was created to calculate the construction-period noise levels at the off-site sensitive receptors, using the construction equipment reference noise levels provided by the Federal Highway Administration (FHWA).¹ The average (hourly L_{eq}) noise level associated with each construction phase is calculated based on the anticipated quantity and type of equipment that would be used during each construction phase. Table 2 on page 7 provides the estimated construction noise levels for various construction phases at the Project's off-site noise-sensitive receptors. To represent the maximum construction noise levels at the off-site sensitive receptors, all construction equipment was assumed to operate simultaneously and was assumed to be located at the construction area nearest to the affected receptors. As indicated in Table 2, the estimated construction-related noise would exceed the significance threshold (existing ambient plus 5 dBA) at the noise-sensitive uses located near the southwest corner of the Project Site (Receptor Location 1) and at the northern boundary of the Project Site (Receptor Location 2), similar to the Original Stadium Project. Mitigation Measures G-1 through G-4 set forth in the Certified EIR would reduce these impacts to the maximum extent feasible. However, as with the Original Stadium Project, such impacts would continue to be significant and unavoidable.

¹ FHWA Roadway Construction Noise Model User's Guide, 2006

Table 2
Estimated Project Construction Noise Levels

Receptor Location	Approximate Distance to Project Construction Area (feet)	Estimated Construction Noise Levels by Phases, dBA L _{eq}					Significance Threshold ^a dBA L _{eq}
		Abatement/ Soft Demolition	Structure Demolition	Grading	Building Construction	Site Finishes	
1- Near Southwest Corner of Project Site	400	60.0	69.0	70.6	67.6	66.1	65.4
2 – Near Northern-central Boundary of Project Site	50	78.0	82.7	84.5	82.6	82.7	62.9
3 –Residential uses East of Figueroa Street	250 ^b	64.1	70.2	72.1	69.7	70.8	72.4
4 – Residential uses on Martin Luther King, Jr. Boulevard	325 ^c	61.8	69.8	71.8	68.3	75.4	81.3
^a Significance threshold is equal to the measured ambient noise levels plus 5 dBA. ^b Construction activities for most of the construction phases would be a minimum 250 feet from Receptor Location 3. However construction for the site finishing phase would occur within approximately 215 feet from Receptor Location 3. This distance was accounted for in the data within this table. ^c Construction for the site finishing phase would occur within approximately 115 feet from Receptor Location 4. This distance was accounted for in the data within this table. Source: AES, 2015.							

Off-Site Construction Noise

As set forth in the Certified EIR, the projected haul route that would be used by haul and delivery trucks for the Original Stadium Project was anticipated to be east/west bound on Martin Luther King, Jr. Boulevard to/from the Project Site utilizing the Interstate 110 (I-110) Freeway. In addition, a secondary haul truck route for the Modified Project may use Figueroa Street to Martin Luther King, Jr. Boulevard and then to the I-110 Freeway. The Certified EIR concluded that the noise levels generated by construction trucks would be substantially similar to the existing noise levels generated by other buses, trucks, and automobiles along the haul route and as such, determined that off-site construction noise impacts would be less than significant.

Off-site construction noise includes trucks used for materials delivery, concrete mixing, and export haul (construction trucks), and construction worker vehicles. Typically, construction trucks generate higher noise levels than construction worker vehicles. In addition, work vehicles would access the Project Site from various roadways; whereas, construction trucks would access the Project Site via designated truck routes. Therefore, to present a worst-case scenario for the Modified Project, the off-site construction noise analysis is based on the construction phase with

the maximum number of construction trucks. Based on the Traffic Study, the maximum number of construction-related truck trips would occur during the grading phase where a maximum of 500 daily trips (400 haul truck trips and 100 worker trips) would be generated.² Based on an 11-hour work day and even distribution of haul trucks, there would be approximately 36 haul truck trips and 35 worker trips (based on the A.M. peak hour). The estimated noise level from Modified Project construction-related truck and worker traffic would be 67.6 dBA L_{eq} at the residential uses along Martin Luther King, Jr. Boulevard (between the Project Site and the I-110 freeway). The estimated noise would be below the existing daytime ambient noise level of 76.3 dBA L_{eq} (measured at Receptor Location 4) along Martin Luther King Jr. Boulevard. In addition, under the secondary haul route, the estimated noise level from construction-related traffic (haul trucks and work vehicles) at the residential uses east of Figueroa Boulevard (Receptor Location 3) would be 60.7 dBA L_{eq} , which would be well below the ambient noise level of 67.4 dBA (measured at Receptor Location 3) for both the projected haul route and the secondary haul route. Therefore, similar to the Original Stadium Project, noise impacts associated with off-site construction under the Modified Project would be less than significant and no mitigation measures are required.

Construction Vibration

As set forth in the Certified EIR, vibration levels associated with construction of the Original Stadium Project could reach as high as approximately 87 VdB within 25 feet of the Project Site from the operation of construction equipment. The nearest sensitive uses would not experience construction related vibration levels above 78.1 VdB. Consequently, the vibration level that would be experienced by these uses would not exceed the Federal Transit Administration's (FTA) vibration impact thresholds, and construction vibration impacts would be considered less than significant.

The vibration analysis for the Modified Project conservatively used the closest distance to construction activity and the construction phase with the equipment mix that would result in the greatest potential vibration. Under the Modified Project, the closest receptor to construction activities would continue to be Receptor Location 2 north of the Project Site. Based on an approximate distance of 50 feet, the construction-related vibration level at this location would be approximately 78 VdB, similar to the Original Stadium Project. This vibration level is less than the FTA's vibration impact threshold. Therefore, ground-borne vibration impacts associated with Modified Project construction would also be less than significant, consistent with the analysis of the Original Stadium Project and no mitigation measures are required.

² *Draft Transportation Analysis Report for the Los Angeles Football Club Stadium Project, Fehr & Peers, Table 7, July 2015.*

Operational Noise

Stadium Use

Operational noise sources contemplated and evaluated under the Certified EIR included crowd noise (particularly yells and cheers at high attendance events), a public address system (amplified public announcements and/or play-by-play announcements), amplified concert music, traffic-related noise, and helicopters and other aircraft covering the events. As set forth in the Certified EIR, the noise levels during soccer games and related sporting events would be substantially similar to the peak noise generating events currently occurring at the Coliseum. However, noise levels generated during concert and related events that would involve the use of amplified music and announcements would be increased compared to existing conditions and could have the potential to adversely impact neighboring uses to the east and south of the Project Site. Accordingly, the Certified EIR determined that concert noise would exceed ambient conditions by five decibels at adjacent residential adjacent areas during off-peak traffic times when ambient noise levels in surrounding communities are lower. Therefore, operational noise impacts from stadium events were determined to be significant. The Certified EIR concluded that no feasible mitigation has been identified to reduce the noise level below the applicable significance threshold, and therefore impacts from stadium events would be significant and unavoidable.

Under the Modified Project, noise impacts associated with the stadium use including MLS soccer games, concerts, and community events would be similar to those analyzed in the Certified EIR for the Original Stadium Project. Thus, noise associated with the stadium use, including crowd noise including yelling and cheering at high attendance events and the public address system, would also exceed the ambient levels at the off-site sensitive uses by 5 dBA or more. Therefore, as with the Original Stadium Project, impacts associated with stadium operations under the Modified Project (i.e. related to concerts, crowd noise including yelling and cheering, a public address system, amplified music, and announcements) would also be significant. No feasible mitigation measures have been identified to reduce the noise level below the applicable significance threshold, and therefore impacts would remain significant and unavoidable.

While not specifically discussed in the Certified EIR for the Original Stadium Project, as part of the Original Stadium Project crowds would have gathered in the outdoor spaces surrounding the stadium before or after an event when entering and exiting the stadium. The Modified Project's use of outdoor spaces is anticipated to be similar to the Original Stadium Project's on an event day. For an event day, an analysis was conducted of use of the Modified Project's outdoor spaces including the Northwest Plaza (e.g., the outdoor dining/seating areas), rooftop terraces (e.g., seating areas, gathering spaces, water features (such as a reflecting pool or pool), and art), and the outdoor spaces along the northern and eastern side of the Project Site with people gathering and

talking before or after an event. The analysis estimated that up to 22,000 people could gather within these outdoor spaces, which is the maximum capacity of the Modified Project stadium. Further, consistent with Project Design Feature O-4, on event days the Ancillary Uses proposed as part of the Modified Project would be open only to ticket-holding game/event patrons during a period of time before, during and after the game/event. Therefore, 22,000 represents a maximum number of people who could gather within the outdoor spaces at the Project Site on an event day. While a total of 22,000 people were analyzed, this represents a conservative worst-case analysis because all game/event patrons are not anticipated to utilize the outdoor spaces at once.

Reference noise levels of 75 dBA and 71 dBA (L_{eq} at a distance of 3.3 feet) for a male and a female speaking in a loud voice, respectively, were used for analyzing noise from the use of these outdoor areas surrounding the Modified Project.³ In order to analyze a typical noise scenario, it was assumed that up to 50 percent of the people (half of which would be male and the other half female) would be talking at the same time. 3 on page 11 presents the estimated noise levels from simultaneous use of the outdoor spaces at the off-site sensitive receptors. As indicated in the 3, the estimated noise levels at the off-site sensitive uses would be below the significance threshold of 5 dBA L_{eq} above ambient noise levels. Thus, potential impacts associated with the use of the outdoor spaces during an event day would be less than significant and no mitigation measures would be required.

Use of Project Site During Non-Event Days

The Modified Project includes approximately 105,900 square feet of Ancillary Uses floor area including office and conference facility space, a “World Football” museum, a team store and other retail space, and restaurants (including outdoor dining). Most of the Ancillary Uses would be centered around the stadium’s main entry plaza at the northwest corner of the Project Site (Northwest Plaza), which would also contain outdoor seating and gathering space, and thus would be shielded from the off-site residential uses to the east and south of the Project Site. In addition, the Modified Project would provide a 40- to 70-foot setback along Figueroa Street to activate the pedestrian realm. This area would be developed as a broad, landscaped sidewalk to provide sufficient space for patrons to circulate and queue on event days, and to provide an inviting and safe pedestrian environment on non-event days. Additionally, up to 3,975 square feet of retail and restaurant use floor area could be located along the stadium’s Figueroa Street frontage.

³ *Handbook of Acoustical Measurements and Noise Control, Table 16.1, Cyril M. Harris, Third Edition, 1991.*

Table 3
Noise Levels from Outdoor Areas During Event Day

Receptor Location^a	Existing Ambient Noise Levels, dBA L_{eq}	Estimated Noise Levels from the Outdoor Uses, dBA L_{eq}	Ambient Plus Outdoor Uses Noise Levels, dBA L_{eq}	Significance Threshold, ^b dBA L_{eq}
1 - Near Southwest Corner of Project Site	60.4	61.4	63.9	65.4
3 –Residential Uses East of Figueroa Street	67.4	68.4	70.9	72.4
4 – Residential uses South of Martin Luther King, Jr. Boulevard	76.3	62.5	76.5	81.3
<p>^a Receptor Location 2 to the north of the Project Site is not a sensitive receptor relative to operations as this receptor currently includes outdoor events and gatherings.</p> <p>^b Significance threshold is equal to the measured ambient noise levels plus 5 dBA.</p> <p>Source: AES, 2015.</p>				

Noise sources at the Northwest Plaza (e.g., the outdoor dining/seating areas), rooftop terraces (e.g., seating areas, gathering spaces, water features (such as a reflecting pool or pool), and art), and the outdoor spaces along the northern and eastern side of the Project Site would include people gathering and talking and the use of an outdoor amplified sound system. Use of the outdoor areas could occur seven days a week with potential hours of operation until 2:00 A.M. For an event day an analysis was conducted of 22,000 people gathering in these outdoor spaces. To provide a conservative analysis, the analysis of a non-event day added the use of an outdoor amplified sound system to the analysis of people gathering in the outdoor spaces on an event day. Consistent with the event day analysis, it was estimated that up to 22,000 people could gather at the outdoor spaces, which is substantially higher than the number of people anticipated on the Project Site on non-event days. The same assumptions regarding reference noise levels and persons talking that were used in the event day outdoor gathering noise analysis above were used for the non-event day. In addition, in accordance with Project Design Feature L-1, the amplified program sound system would be designed so as not to exceed a maximum noise level of 85 dBA L_{eq} and 75 dBA L_{eq} at a distance of 50 feet within the Northwest Plaza and the Figueroa Street frontage, respectively. With incorporation of this Project Design Feature the amplified program sound would not exceed the significance threshold (i.e., an increase of 5 dBA L_{eq} at any off-site residential receptor). Table 4 on page 12 presents the estimated noise levels from simultaneous use of the outdoor spaces at the off-site sensitive receptors with the amplified program sound system described above. As indicated in Table 4, the estimated noise levels at the off-site sensitive uses on non-event days would be below the significance threshold of 5 dBA L_{eq} above ambient noise levels. Thus,

Table 4
Noise Levels from Outdoor Areas During Non-Event Day

Receptor Location^a	Existing Ambient Noise Levels, dBA L_{eq}	Estimated Noise Levels from the Outdoor Uses, dBA L_{eq}	Ambient Plus Outdoor Uses Noise Levels, dBA L_{eq}	Significance Threshold,^b dBA L_{eq}
1 – Near Southwest Corner of Project Site	60.4	62.9	64.9	65.4
3 – Residential Uses East of Figueroa Street	67.4	69.7	71.7	72.4
4 – Residential uses South of Martin Luther King, Jr. Boulevard	76.3	63.8	76.5	81.3
^a Receptor Location 2 to the north of the Project Site is not a sensitive receptor relative to operations as this receptor currently includes outdoor events and gatherings. ^b Significance threshold is equal to the measured ambient noise levels plus 5 dBA. Source: AES, 2015.				

potential impacts associated with the use of the outdoor spaces on non-event days, along with an amplified program sound system complying with Project Design Feature L-1, would be less than significant and no mitigation measures would be required.

VIP Parking Lot

As set forth in the Certified EIR, the Original Stadium Project would not increase the maximum size of the events currently held at the existing Sports Arena. Combined with the Coliseum, the Project Site currently holds events ranging from 500 to 93,000 people in attendance. Events and attendance proposed at the new event/soccer stadium facility are within the purview of the existing operations of the Sports Arena and the Coliseum and would not result in an increase in the number of people (or motor vehicles) for individual events at the Sports Arena. Accordingly, parking related noise would not be increased as a result of the Original Stadium Project as compared to existing conditions. Thus, parking-related noise impacts under the Certified EIR were concluded to be less than significant.

Under the Modified Project, the existing VIP parking lot west of the stadium would be retained and would be reconfigured and re-landscaped to provide a secure, VIP parking lot with up to approximately 250 spaces. The parking lot would be similar to that set forth under the Original Stadium Project and for the reasons described above and in the Certified EIR, would result in less than significant noise impacts. No mitigation measures are required.

Loading Dock Activities

While not specifically evaluated in the Certified EIR for the Original Stadium Project, noise associated with the loading dock activities would not increase the ambient noise levels at the off-site noise sensitive uses due to the sound attenuation provided by the relatively long distances and intervening structures between the sensitive off-site uses and the loading dock. As such impacts associated with use of the loading dock under the Original Stadium Project would be less than significant. The Modified Project could include both above-grade and below-grade loading docks, which would be located within the northwest portion of the Project Site along the southern and western perimeters of the Ancillary Uses, respectively. The nearest residences to the south and to the east would be at least approximately 615 feet and 900 feet, respectively, from the above-grade loading dock (which has the greater potential to generate noise that could be heard at nearby sensitive receptors). Noise levels would be approximately 65 dBA L_{eq} at a distance of 100 feet, based on measured noise levels from other loading dock facilities.⁴ Based on this reference noise level, distance attenuation, and intervening structures, loading dock noise levels at Receptor Location 4 (to the south) and Receptor Location 3 (to the east) would be approximately 39 dBA L_{eq} and 36 dBA L_{eq} , respectively, which would be well below the measured ambient noise levels. Furthermore, the above-grade loading dock would be shielded from the off-site sensitive receptors to the east (Receptor Location 3) by the new stadium structure and the off-site sensitive receptors to the south (Receptor Location 4) by part of the Ancillary Uses structure. Additionally, the majority of the loading activities would occur at the below-grade loading docks. Therefore, noise impacts associated with loading dock operations under the Modified Project would be less than significant and no mitigation measures would be required.

Off-site Traffic

As discussed above and in the Certified EIR, the Original Stadium Project would not increase the maximum size of the events currently held at the Project Site in the existing Sports Arena. Accordingly, the number of vehicles and vehicular-related noise would not be increased as a result of the Original Stadium Project. Thus, traffic noise impacts evaluated in the Certified EIR were concluded to be less than significant.

As set forth in the Traffic Study, similar to the Original Stadium Project, the Modified Project would not generate substantial additional traffic on an event day. Therefore, as with the Original Stadium Project, noise impacts from off-site traffic on event days would be less than significant under the Modified Project. However, the proposed Ancillary Uses do not currently exist on the Project Site and were not included as part of the Original Stadium Project. Therefore, noise

⁴ Reference noise level is based on data, *Foothills Ranch Wal-Mart Expansion Project*, 2007.

impacts associated with the off-site traffic generated from the Ancillary Uses on a non-event day have been analyzed based on the traffic volumes provided in the Project's Traffic Study. As provided in the Traffic Study, the Ancillary Uses are estimated to generate approximately 2,615 daily trips on a non-event day. As such, Project-related traffic would increase the existing traffic volumes along the roadway segments in the vicinity of the Project Site when compared with "Future (2018) Without Project" conditions set forth in the Traffic Study. This increase in roadway traffic was analyzed to determine if any traffic-related noise impacts would result from the Ancillary Uses.

Twenty (20) roadway segments were selected to evaluate potential traffic noise impacts. These segments were selected based on proximity to noise-sensitive uses along the roadway segments and potential increases in traffic volumes from the Modified Project. Traffic noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) and traffic volume data from the Project's Traffic Study. The TNM traffic noise prediction model calculates the hourly L_{eq} noise levels based on specific information including the hourly traffic volume, vehicle type mix, vehicle speed, and lateral distance between the noise receptor and the roadway. To calculate the 24-hour CNEL levels, the hourly L_{eq} levels were calculated during daytime hours (7:00 A.M. to 7:00 P.M.), evening hours (7:00 P.M. to 10:00 P.M.), and nighttime hours (10:00 P.M. to 7:00 A.M.). To determine the Modified Project-related noise impacts, the roadway noise conditions under "Future (2018) Without Project" conditions set forth in the Modified Project's Traffic Study were calculated and compared to noise levels that would occur with implementation of "Future (2018) Plus Project" conditions set forth in the Modified Project's Traffic Study.

Table 5 on page 15 provides the calculated off-site roadway noise levels in the vicinity of the Project Site for the Future (2018) Without Project and Future (2018) Plus Project conditions. The calculated CNEL levels are applicable to the front of the roadways and do not account for the presence of any physical sound barriers or intervening structures. As shown in Table 5, traffic from the Ancillary Uses would result in a maximum increase of up to 0.1 dBA (CNEL) at some of the roadway segments. The 0.1-dBA increase in traffic noise levels is considered negligible and would be well below the 3-dBA significance threshold (applicable when noise level falls within the normally unacceptable category; i.e., 70 CNEL or greater at noise-sensitive uses). Therefore, off-site traffic noise impacts associated with the Ancillary Uses would be less than significant. Thus, similar to the Original Stadium Project, noise impacts associated with off-site roadway under the Modified Project would be less than significant. No mitigation measures are required.

Table 5
Off-Site Traffic Noise Impacts—Ancillary Uses Non-Event Day

Roadway Segment	Adjacent Sensitive Land Use	Calculated Traffic Noise Levels, CNEL (dBA)		Increase in Noise Levels due to Project, CNEL (dBA)	Significant Impact?
		Future (2018) Without Project	Future (2018) Plus Project		
Exposition Boulevard					
– West of Vermont Ave.	Residential	70.0	70.0	0.0	No
– Between Vermont Ave. and Figueroa St.	Residential, University, Park	71.0	71.0	0.0	No
Martin Luther King Jr. Boulevard					
– West of Vermont Ave.	Residential	73.6	73.6	0.0	No
– Between Vermont Ave. and Hoover St.	Residential	73.8	73.8	0.0	No
– Between Hoover St. and Figueroa St.	Residential, School	73.7	73.8	0.1	No
– East of I-110 Freeway	Residential	72.2	72.2	0.0	No
Vernon Avenue					
– West of Hoover St.	Residential, School	72.2	72.2	0.0	No
– Between Hoover St. and Figueroa St.	Residential	72.3	72.3	0.0	No
– East of Figueroa St.	Residential, School	72.7	72.7	0.0	No
Vermont Avenue					
– North of Exposition Blvd.	Residential, University	72.6	72.6	0.0	No
– Between Exposition Blvd. and MLK Jr. Blvd.	Residential, University, Park	72.6	72.7	0.1	No
– South of MLK Jr. Blvd.	Residential, School	72.2	72.2	0.0	No
Figueroa Street					
– North of Exposition Blvd.	Residential, University, Hotel	73.1	73.1	0.0	No
– Between Exposition Blvd. and 38th Street.	Residential, School	72.6	72.6	0.0	No
– Between 38th St. and 39th St.	Residential, Park	73.0	73.8	0.0	No
– Between 39th St. and MLK Jr. Blvd.	Park	73.0	73.0	0.0	No
– Between MLK Jr. Blvd. and Vernon Ave.	Residential	72.7	72.7	0.0	No

Table 5 (Continued)
Off-Site Traffic Noise Impacts—Ancillary Uses Non-Event Day

Roadway Segment	Adjacent Sensitive Land Use	Calculated Traffic Noise Levels, CNEL (dBA)		Increase in Noise Levels due to Project, CNEL (dBA)	Significant Impact?
		Future (2018) Without Project	Future (2018) Plus Project		
– South of Vernon Ave.	Residential	72.8	72.8	0.0	No
Hoover Street					
– Between MLK Jr. Blvd. and Vernon Ave.	Residential	71.1	71.1	0.0	No
– South of Vernon Ave.	Residential, School	71.8	71.8	0.0	No
Source: AES, 2015.					

The Modified Project and related projects in the area would produce traffic volumes (off-site mobile sources) that would generate roadway noise. Cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from Existing conditions to Future Plus Project conditions to the applicable significance criteria. Future cumulative conditions include traffic volumes from future ambient growth, related projects, and the Modified Project. The calculated traffic noise levels under Existing and Future Plus Project conditions are presented in Table 6 on page 17. As shown therein, cumulative traffic volumes would result in a maximum increase of 0.6 dBA CNEL along Figueroa Street (north of Exposition Avenue). The estimated cumulative noise increase would be below the 3-dBA significance threshold. Therefore, cumulative noise impacts due to off-site mobile noise sources associated with the Modified Project, future growth, and related projects would be less than significant. No mitigation measures are required.

Table 6
Off-Site Traffic Noise Impacts—Ancillary Uses Non-Event Day

Roadway Segment	Adjacent Sensitive Land Use	Calculated Traffic Noise Levels, CNEL (dBA)		Cumulative Increase in Noise Levels, CNEL (dBA)	Significant Impact?
		Existing (2015)	Future (2018) Cumulative Plus Project		
Exposition Boulevard					
– West of Vermont Ave.	Residential	69.8	70.0	0.2	No
– Between Vermont Ave. and Figueroa St.	Residential, University, Park	70.8	71.0	0.2	No
Martin Luther King Jr. Boulevard					
– West of Vermont Ave.	Residential	73.4	73.6	0.2	No
– Between Vermont Ave. and Hoover St.	Residential	73.6	73.8	0.2	No
– Between Hoover St. and Figueroa St.	Residential, School	73.6	73.8	0.2	No
– East of I-110 Freeway	Residential	72.0	72.2	0.2	No
Vernon Avenue					
– West of Hoover St.	Residential, School	72.1	72.2	0.1	No
– Between Hoover St. and Figueroa St.	Residential	72.2	72.3	0.1	No
– East of Figueroa St.	Residential, School	72.6	72.7	0.1	No
Vermont Avenue					
– North of Exposition Blvd.	Residential, University	72.2	72.6	0.4	No
– Between Exposition Blvd. and MLK Jr. Blvd.	Residential, University, Park	72.4	72.7	0.3	No
– South of MLK Jr. Blvd.	Residential, School	72.0	72.2	0.2	No
Figueroa Street					
– North of Exposition Blvd.	Residential, University, Hotel	72.5	73.1	0.6	No
– Between Exposition Blvd. and 38th Street.	Residential, School	72.4	72.6	0.2	No
– Between 38th St. and 39th St.	Residential, Park	72.7	73.0	0.3	No
– Between 39th St. and MLK Jr. Blvd.	Park	72.9	73.0	0.1	No
– Between MLK Jr. Blvd. and Vernon Ave.	Residential	72.6	72.7	0.1	No

Table 6 (Continued)
Off-Site Traffic Noise Impacts—Ancillary Uses Non-Event Day

Roadway Segment	Adjacent Sensitive Land Use	Calculated Traffic Noise Levels, CNEL (dBA)		Cumulative Increase in Noise Levels, CNEL (dBA)	Significant Impact?
		Existing (2015)	Future (2018) Cumulative Plus Project		
– South of Vernon Ave.	Residential	72.6	72.8	0.2	No
Hoover Street					
– Between MLK Jr. Blvd. and Vernon Ave.	Residential	71.0	71.1	0.1	No
– South of Vernon Ave.	Residential, School	71.7	71.8	0.1	No
Source: AES, 2015					

Conclusion

In summary, consistent with the conclusion in the Certified EIR for the Original Stadium Project (refer to IV.G. Noise, of the Certified EIR), impacts with respect to construction noise and operational stadium event noise (i.e., related to concerts, crowd noise including yelling and cheering, a public address system, amplified music, and announcements) would continue to be significant and unavoidable under the Modified Project. In addition, as set forth above, impacts associated with the outdoor uses on a non-event day, including use of the Northwest Plaza and the Figueroa Street frontage, and traffic and parking noise would be less than significant under the Modified Project. Therefore, the Modified Project would not result in any new significant impacts with respect to noise, and it would not substantially increase the severity of any significant impacts previously identified in the Certified EIR.

Mitigation Measures

The Certified EIR included code required measures and mitigation measures to mitigate the Original Stadium Project's noise impacts to the extent feasible. These code required measures and mitigation measures would continue to be implemented as part of the Modified Project and have been incorporated into the MMP included with the Addendum, with the revisions indicated below to reflect the design characteristics of the Modified Project. It should be noted that the exterior construction hour restrictions established for the Original Stadium Project by code required measure CR G-2 in the Certified EIR, which would also apply to the Modified Project, are more restrictive than the construction hour noise regulations currently set forth in Section 41.40 of the LAMC, which prohibit construction activities before 7:00 A.M. and after 9:00 P.M. Monday through Friday, before 8:00 A.M. and after 6:00 P.M. on Saturday or on a national holiday, and at any time on Sunday.

Code Required Measures

- | | |
|--------|---|
| CR G-1 | The Applicant shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574, and any subsequent ordinances <u>LAMC</u> , which prohibits the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible. |
| CR G-2 | The Applicant shall ensure <u>exterior</u> construction and demolition <u>activities are limited</u> be restricted to the hours of 7:00 A.M. to 6:00 P.M. Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday. |

Project Design Features

- PDF L-1** During non-event days, the amplified program sound system shall be designed so as not to exceed a maximum noise level of 85 dBA L_{eq} and 75 dBA L_{eq} at a distance of 50 feet within the Northwest Plaza and the Figueroa Street frontage, respectively.

Project-Specific Mitigation Measures

- MM G-1** The Applicant shall prepare a ~~construction-related traffic plan~~ Construction Management Plan detailing proposed haul routes and staging areas for the transportation of materials and equipment, with consideration for sensitive uses in the neighborhood. ~~A traffic and parking plan for the construction phase will~~ The Construction Management Plan shall be submitted for approval by LADOT and the Department of Building and Safety prior to the issuance of any permits. The Construction Management Plan shall include the following requirements:
- The preferred haul route to and from the Project Site shall be Martin Luther King, Jr. Boulevard to and from the Harbor Freeway. Trucks shall not be permitted to travel along local residential streets.
 - A flagman shall be placed at the truck entry and exit from the Project Site onto Martin Luther King, Jr. Boulevard to control the flow of exiting trucks.
 - Deliveries and pick-ups of construction materials shall be scheduled during non-peak travel periods to the degree possible and coordinated to reduce the potential of trucks waiting to load or unload for protracted periods of time.
 - Access shall remain unobstructed for land uses in proximity to the Project Site during construction of the Modified Project.
 - In the event of a lane or sidewalk closure, a worksite traffic control plan, approved by the City of Los Angeles, shall be implemented to route traffic or pedestrians around any such lane or sidewalk closures.
 - The locations of truck staging shall be identified and measures shall be included to ensure that trucks use the specified haul route and do not travel through nearby residential neighborhoods.
 - Vehicle movements shall be scheduled to minimize vehicles waiting off-site and impeding public traffic flow on the surrounding streets.
 - Requirements shall be established for the loading, unloading, and storage of materials on the Project Site.

- Requirements shall be established for the temporary removal of parking spaces, time limits for the reduction of travel lanes, and closing or diversion of pedestrian facilities to ensure the safety of pedestrian and access to local businesses.
- The Applicant shall coordinate with the City and emergency service providers to ensure adequate access is maintained to the Project Site and neighboring businesses.
- If the construction periods for the Modified Project and the My Figueroa street improvement project overlap, the Applicant shall coordinate with the City to minimize the potential combined effects of the two projects to the extent possible.

- MM G-2 The Applicant shall ensure all construction equipment engines be properly tuned and muffled according to manufacturers' specifications. For example, Table IV.G-6 in the Certified EIR indicates that noise levels of 82 dBA at 50 feet could be reduced to a noise level of 76 dBA at 100 feet with the proper use of mufflers.
- MM G-3 Adjacent museums and residents shall be given regular notification of major construction activities and their durations. A visible and readable sign (at a distance of 50 feet) shall be posted on the construction site identifying a telephone number where residents can inquire about the construction process and register complaints.
- MM G-4 The perimeter of the Project Site shall be enclosed with a temporary barrier wall for security and noise protection purposes during project construction. This barrier wall shall consist of a solid, heavy vinyl material or 0.75 inch plywood positioned to block direct line of sight from the active construction areas and other open space areas and sensitive uses.